Two new species of the genus *Rubrocuneocoris* of China, and five new record species of tribe Phylini from China (Hemiptera: Miridae: Phylinae)

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Abstract: The genus *Rubrocuneocoris* Schuh is recorded from China for the first time. *Rubrocuneocoris lanceus* sp. nov. and *Rubrocuneocoris wudingensis* sp. nov. are described as new to science. Five species of tribe Phylini are newly recorded from China: *Decomia tytthos* Schuh, 1984, *Moissonia importunitas* (Distant, 1910), *Moissonia novoguinensis* (Schuh, 1984), *Opuna ryandi* Schuh, 1984, and *Sacculifer rufinervis* (Jakovlev, 1880). The digital habitus photographs and illustrations of the male genitalia are given. All type specimens are deposited in Institute of Entomology, Nankai University, Tianjin, China.

Key words: Hemiptera; Phylinae; *Rubrocuneocoris*; new species; new record; China

Schuh (1984) erected the genus *Rubrocuneocoris* to accommodate the type species *Rubrocuneocoris acuminatus*, and described three species, *R. acuminatus*, *R. bifidus* and *R. spiculatus*, from the Indo-Pacific. Subsequently, two species, *R. quercicola* Josifov, 1987 from Korea and *R. albescens* Yasunaga, 2001 from Japan, were reported for the genus. Up to now, 5 species of *Rubrocuneocoris* have been recorded in the world.

In the present paper, the genus *Rubrocuneocoris* is recorded from China for the first time. Two species are described as new to science. Five other species of tribe Phylini are newly recorded from China. Digital habitus photographs and illustrations of the male genitalia are given. Detailed information is provided for most material examined. Measurements in text and Table 1 are in millimeter.

Taxonomy

Rubrocuneocoris Schuh, 1984, new record for China

Rubrocuneocoris Schuh, 1984: 424.

Type species: *Rubrocuneocoris acuminatus* Schuh, 1984

Diagnosis. Small to moderate size, coloration reddish; doesal vestiture covered with a single type pubescence; head slightly concave behind; antennal segment Ⅱ darkened distally; labium reaching abdomen; corium and cuneus with red spots at apices; metafemora enlarged; vesica usually forming a coil, apex attenuated, secondary gonopore well developed and subapically situated.

Table 1 Measurements of *Rubrocuneocoris* new species from China

Species and sex	Range	Body length	Head width	Interocular distance	Eye width	Antennal segment Ⅱ length	Pronotum width	Pronotum length
R. lanceus								
Male (*N* = 5)	Min.	2.98	0.56	0.26	0.15	0.96	1.09	0.47
	Max.	3.14	0.61	0.31	0.17	1.02	1.20	0.55
Female (*N* = 5)	Min.	2.94	0.53	0.24	0.14	0.85	1.04	0.46
	Max.	3.12	0.59	0.31	0.16	0.92	1.17	0.53
R. wudingensis								
Male (*N* = 5)	Min.	3.23	0.65	0.28	0.17	0.85	1.07	0.44
	Max.	3.26	0.67	0.29	0.18	0.89	1.11	0.46
Female (*N* = 5)	Min.	3.21	0.63	0.34	0.15	0.76	1.03	0.41
	Max.	3.24	0.66	0.37	0.17	0.81	1.05	0.45

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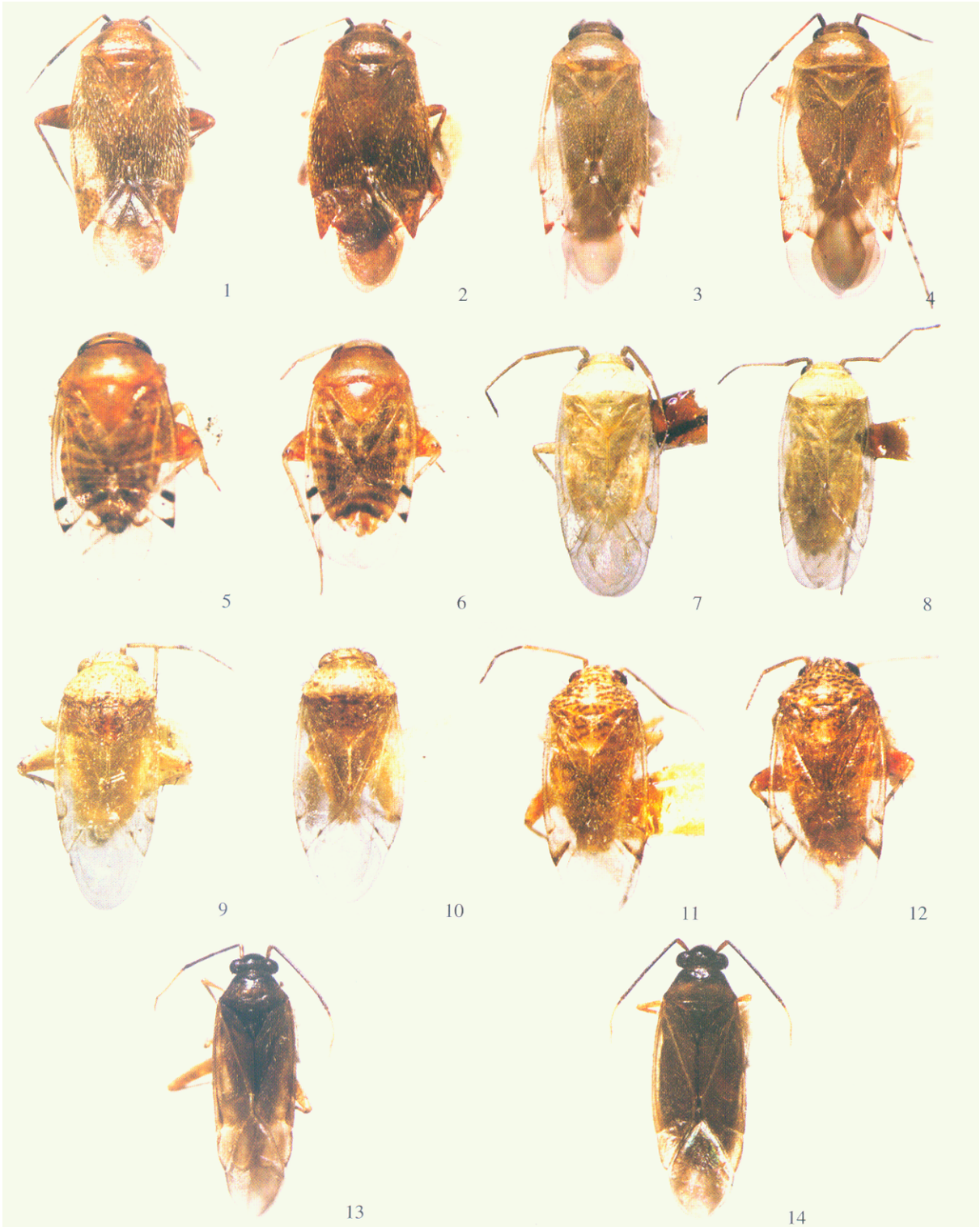
***Rubrocuneocoris lanceus* sp. nov.** (Figs. 1 – 2, 15 – 18)

Diagnosis. Recognized by its moderately small size, the coloration of the antennal segments, the corium and cuneus with red spots apically, and the vesica forming a coil with three straps at the apex. Most similar in body form and coloration to *R. spiculatus* Schuh, but they can be separated by the structure of the vesicae. One lance-shaped strap of the vesica is similar to *R. bifidus* Schuh, but in *R. bifidus*, vesica only have two straps



Figs. 1 – 14　Dorsal habitus photographs.

1. *Rubrocuneocoris lanceus* ♂. 2. *Rubrocuneocoris lanceus* ♀. 3. *Rubrocuneocoris wudingensis* ♂. 4. *Rubrocuneocoris wudingensis* ♀. 5. *Decomia tytthos* ♂. 6. *Decomia tytthos* ♀. 7. *Moissonia importunitas* ♂. 8. *Moissonia importunitas* ♀. 9. *Moissonia novoguinensis* ♂. 10. *Moissonia novoguinensis* ♀. 11. *Opuna ryandi* ♂. 12. *Opuna ryandi* ♀. 13. *Sacculifer rufinervis* ♂. 14. *Sacculifer rufinervis* ♀.

at the apex.

Description. Male as in Fig. 1. Female as in Fig. 2.

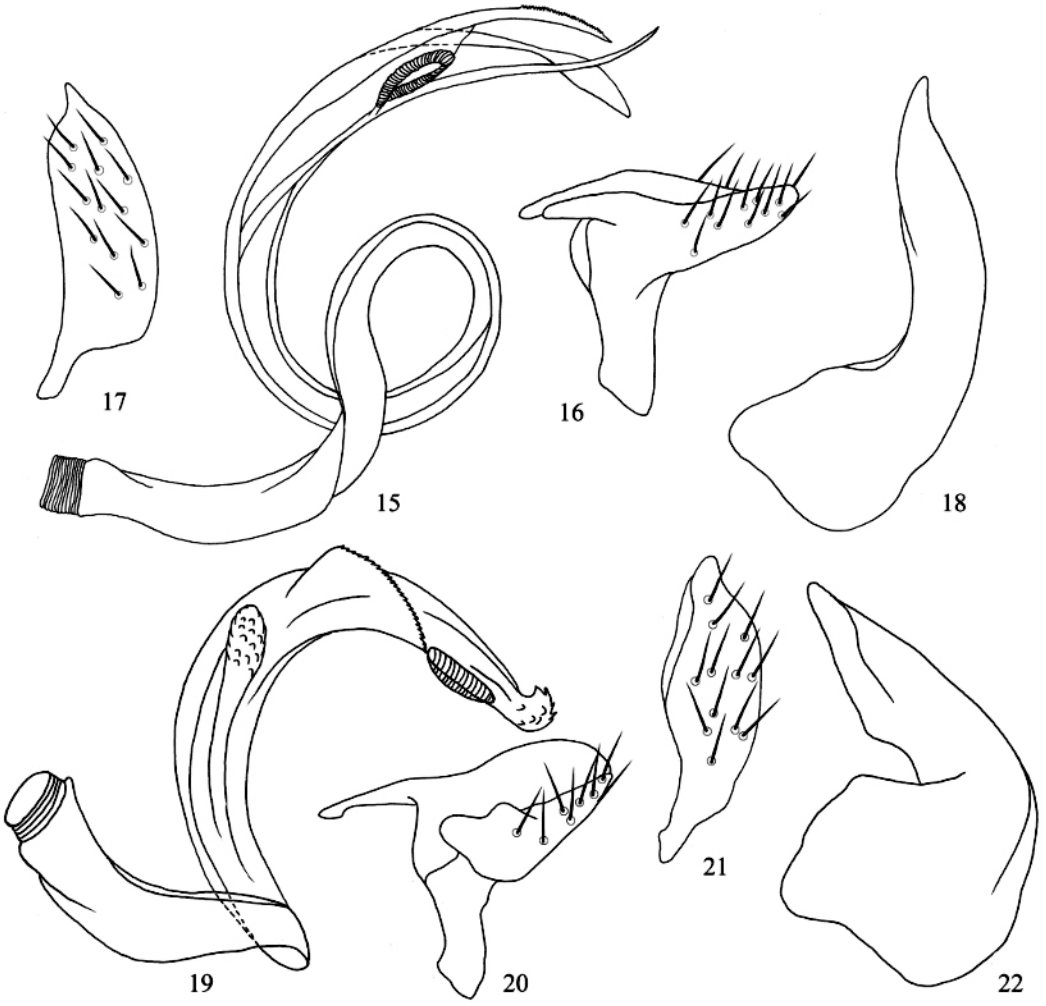
Coloration: Dorsum yellowish brown, covered with shining, yellow pubescence; antennal segment Ⅰ dark brown, segment Ⅱ yellow, but dark at apex, segments Ⅲ and Ⅳ entirely dark brown or yellow; eyes reddish brown; clypeus and mandibular palte varying from completely dark brown to red; buccula yellow; labium brown, darkened apically; hemelytra (including cuneus) with dark speckles, apex of the corium and cuneus with red spots; membrane fumose, veins reddish; femora dark brown, somewhat reddish; tibiae yellowish brown, coloration of tibial spines as tibiae without black spots at bases; abdomen dark brown.

Structure: Vestiture of dorsum covered with a single type of rather long, recumbent, shining pubescence; head small, subvertical; clypeus not visible from above; frons and vertex slightly convex, posterior margin of vertex weakly concave; eyes granular, occupying nearly total height of head in lateral view, eye width smaller than interocular distance; antennae inserted below ventral margin of eye, segment Ⅱ long, much longer than width of head, segments Ⅲ and Ⅳ more slender than segment Ⅱ; labium long, reaching abdomen; pronotum evenly rounded, calli not clear; hemelytra smooth, weakly deflexed at fracture; pygophore large relative to total size of abdomen.

Male genitalia (Figs. 15 – 18): Vesica forming a complete large coil, with three straps at apex, one with many small serrations, one lance-shaped, last one slender and acuate, secondary gonopore subapical; left paramere boat-shaped, typical phyline form; right paramere lanceolate; phallotheca bend.

Etymology. Named for a lance-shaped strap of the apex of the vesica.

Type specimens: Holotype: ♂, Ningshan (33°19′N, 108°20′E, alt. 1 640m), Shaanxi Province, China, 12.viii.1994, leg. Wen-Jun BU. Paratypes: 4 ♂♂, 3 ♀♀, same data as holotype; 2 ♂♂, 2 ♀♀, Jinfu Mountain (29°00′N, 107°10′E, alt. 1 200 m), Chongqing, 2.ix.2000, leg. Chuan-Ren LI.



Figs. 15 – 22 Male genitalia of *Rubrocuneocoris* spp.

15 – 18. *R. lanceus*: 15. Vesica; 16. Left paramere; 17. Right paramere; 18. Phallotheca. 19 – 22. *R. wudingensis*: 19. Vesica; 20. Left paramere; 21. Right paramere; 22. Phallotheca.

***Rubrocuneocoris wudingensis* sp. nov.** (Figs. 3 – 4, 19 – 22)

Diagnosis. Recognized by its medium-sized body, the dorsum yellow, the coloration of the antennal segments, the red spots at the apex of the corium and cuneus, and the structure of male genitalia. The shape of the vesica is similar to *R. quercicola* Josifov. But in *R. quercicola*, the vesica does not have a long median projection and secondary gonopore is situated relatively far from apex of vesica.

Description: Male as in Fig. 3. Female as in Fig. 4, interocular distance longer than that of male.

Coloration: Dorsum yellow; antennal segments Ⅰ, Ⅲ and Ⅳ entirely reddish black, segment Ⅱ dirty yellow, but reddish black on apical one-third; eyes reddish brown; mandibular plate often yellow, apex of clypeus and maxillary plate reddish brown; buccula yellow; labium yellow and darkened apically; the apex of the corium and cuneus with red spots; membrane fumose, vein reddish; legs yellow, metafemora suffused red; tibiae darkened at base, tibial spines dark without black spots at bases; tarsus and claw darkened; abdomen uniformly reddish brown.

Structure: Dorsum smooth and weakly shining, with pale shining pubescence; head strongly declining; clypeus not visible from above; vertex relatively flat, posterior margin slightly concave; eyes occupying the entire height of head in lateral view, interocular distance longer than width of eye; antenna inserted below ventral margin of eye, antennal segment Ⅱ longer than width of head; labium reaching just abdomen; pronotum convexly rounded, calli not clear; hemelytra weakly deflexed at fracture; pygophore small, weakly deflexed.

Male genitalia (Figs. 19 – 22): Vesica forming a small coil and with a sawtooth strap, a long projection situated middle of vesica, apex of vesica dentate, secondary gonopore well developed, situated near apex of vesica; left paramere boat-shaped, as in Fig. 20; right paramere lanceolate; phallotheca strongly bent.

Etymology. Named for its type locality, Wuding of Yunnan Province.

Type specimens: Holotype: ♂, Wuding (25°32′N, 102°22′E, alt. 2 200 m), Yunnan Province, China, 10.viii.1986. Paratypes: 4 ♂♂, 4 ♀♀, same data as holotype.

***Decomia tytthos* Schuh, 1984, new record for China** (Figs. 5 – 6, 23 – 25)

Decomia tytthos Schuh, 1984: 354.

Diagnosis. Total length 1.96 – 2.05, ovoid; basic coloration dirty yellow; apex of corium, clavus and cuneus with dark brown markings; hemelytra hyaline; apex of labium brown; distal one-third of metafemora suffused red; pygophore black; vesica L-shaped, terminal membranous elaboration of vesica directed to the right (Fig. 23); setae of posterior process of left paramere arising from very a small tubercle (Fig. 24).

Specimens examined. 5 ♂♂, 4 ♀♀, Chayu (28° 38′N, 97°29′E, alt. 1 570 m), Xizang Autonomous Region, China, 24.vi.1973, leg. Fa-Sheng LI.

Distribution. Xizang (Chayu); Borneo.

***Moissonia importunitas* (Distant, 1910), new record for China** (Figs. 7 – 8, 26 – 28)

Ragmus importunitas Distant, 1910: 18; Schuh, 1984: 416.

Ellenia importunitas: Linnavuori, 1993: 184.

Moissonia importunitas: Linnavuori and Al-Safadi, 1993: 233.

Diagnosis. Total length 2.73 – 2.99, ovoid; basic coloration yellowish white, smaller dark spots at bases of setae on dorsum hardly visible; antennal segment Ⅰ with a narrow dark ring basally; hemelytra subhyaline; femora with dark spots; vesica with a single apical spine with several apical spicules, middle of vesica with a semicircular, membranous, marginally dentate lobe (Fig. 26); left paramere with an elevated and strongly curved hypophysis (Fig. 27).

Specimens examined. 9 ♂♂, 26 ♀♀, Guangzhou (23°08′N, 113°14′E), Guangdong Province, China, 10.x.1962, leg. Le-Yi ZHENG and Han-Hua CHENG.

Distribution. Guangdong (Guangzhou); India east to Solomon Is, Sri Lanka, Uganda, South Africa.

***Moissonia novoguinensis* (Schuh, 1984), new record for China** (Figs. 9 – 10, 29 – 31)

Ellenia novoguinensis Schuh, 1984: 369.

Moissonia novoguinensis: Linnavuori and Al-Safadi, 1993: 233.

Diagnosis. Total length 2.70 – 3.01, ovoid; basic coloration orangish yellow; pronotum and scutellum with many dark spots; hemelytra hyaline, without dark spots; apex of corium with a dark brown marking; black spines on proximal portion of tibiae with dark bases, those on distal portion without black bases; abdomen greenish, apex of pygophore infuscate; vesica with a single short apical spine, lateral lamella with about four teeth on the elongate apical part (Fig. 29); left paramere with hypophysis elongated and nearly vertical, weakly bent apically (Fig. 30).

Specimens examined. 20 ♂♂, 31 ♀♀, Xishuangbanna (22° 01′ N, 100° 48′ E), Yunnan Province, China, 10 – 12.x.1958.

Distribution. Yunnan (Xishuangbanna); New Guinea.

***Opuna ryandi* Schuh, 1984, new record for China** (Figs. 11 – 12, 32 – 34)

Opuna ryandi Schuh, 1984: 408.

Diagnosis. Total length 3.17 – 3.32, body relatively stout, ovoid; basic coloration dirty yellow; head, pronotum and scutellum with dense brown spots;

hemelytra hyaline with sparse, medium-sized, brown spots; apex of cuneus dark; tibial spines with black bases; pygophore heavily reddish; vesica curved, more or less C-shaped, with a single apical spine, some small denticles at level of secondary gonopore (Fig. 32); left paramere as in Fig. 33.

Specimens examined. 5 ♂♂, 4 ♀♀, Xishuangbanna (22° 01′ N, 100° 48′ E), Yunnan Province, China, 10.v.1958.

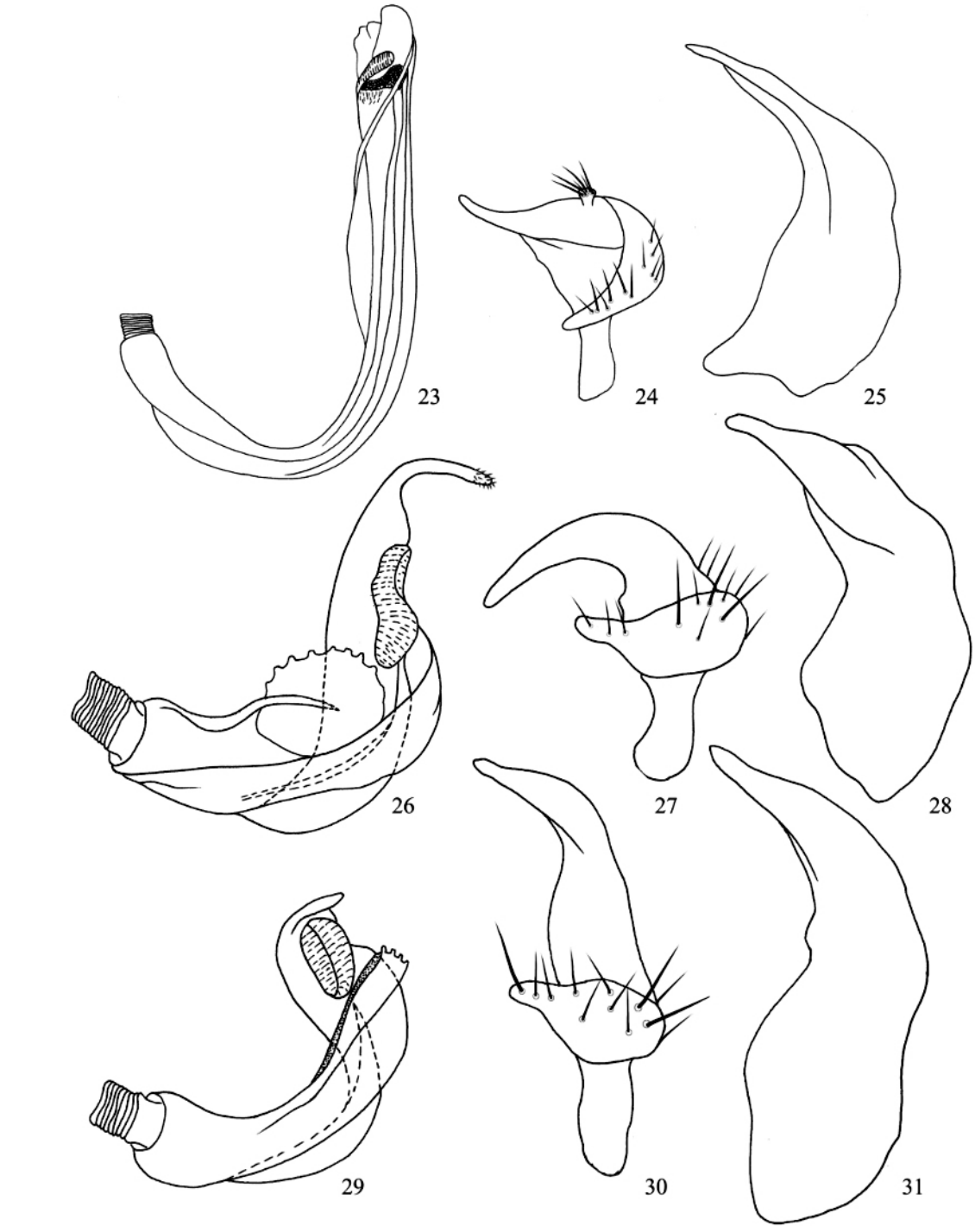
Distribution. Yunnan (Xishuangbanna); Borneo.

***Sacculifer rufinervis* (Jakovlev, 1880), new record for China** (Figs. 13 – 14, 35 – 38)

Plagiognathus rufinervis Jakovlev, 1880: 218

Sacculifer rufinervis: Kerzhner, 1959: 98; Kerzhner, 1970: 644.

Diagnosis. Total length 3.70 – 3.93, body relatively



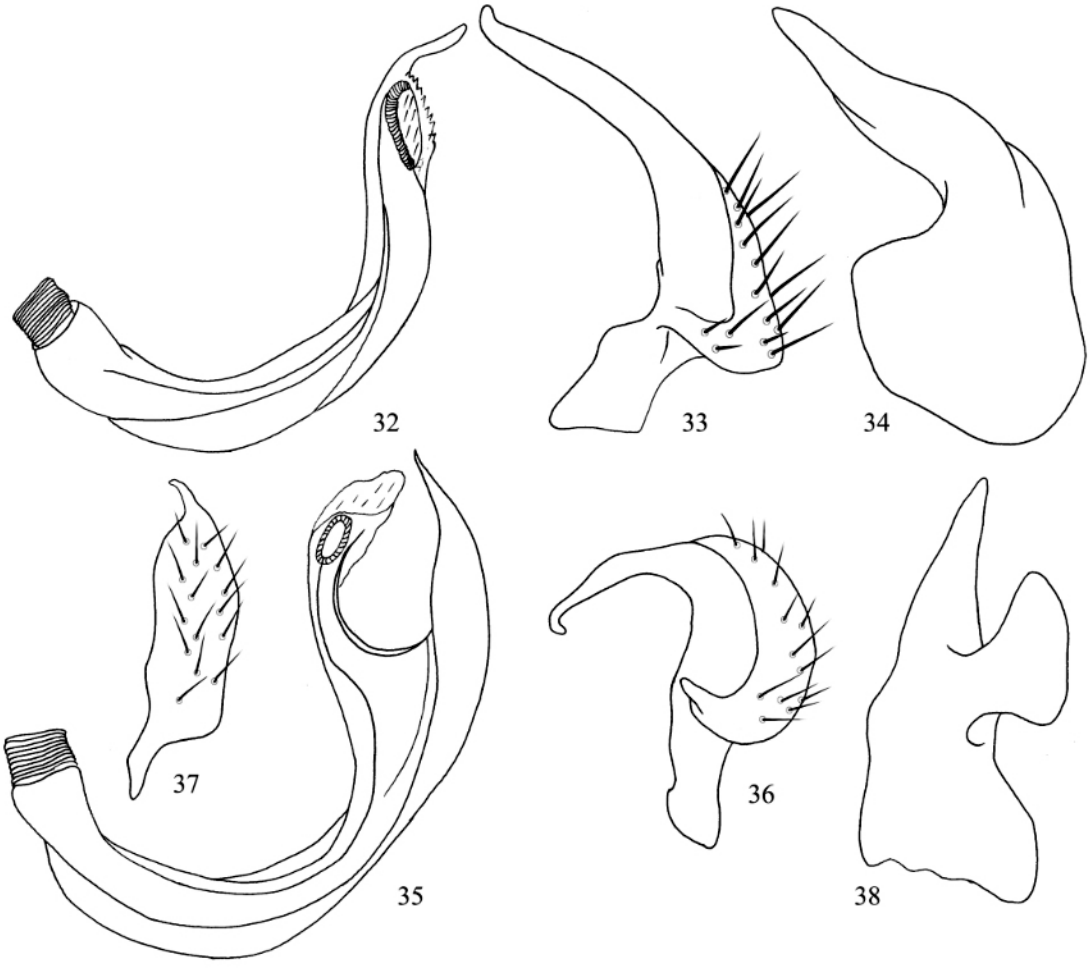
Figs. 23 – 31 Male genitalia.

23 – 25. *Decomia tytthos*: 23. Vesica; 24. Left paramere; 25. Phallotheca. 26 – 28. *Moissonia importunitas*: 26. Vesica; 27. Left paramere; 28. Phallotheca. 29 – 31. *Moissonia novoguinensis*: 29. Vesica; 30. Left paramere; 31. Phallotheca.

slender, elongate ovoid; basic coloration brown; head almost entirely black; antennal segment Ⅱ black, segments Ⅲ and Ⅳ yellow; legs yellowish brown; vesica C-shaped, stout, structure as in Fig. 35; phallotheca with a bursa (Fig. 38).

Specimens examined. 6 ♂♂, 6 ♀♀, Tol Gol (50° 28′ N, 121° 39′ E), Inner Mongolia Autonomous Region, China, 9. vii. 1988, Hong-Yang LI leg.

Distribution. Inner Mongolia (Tol Gol); Russia, Tajikistan.



Figs. 32 – 38　Male genitalia.

32 – 34. *Opuna ryandi*：32. Vesica；33. Left paramere；34. Phallotheca. 35 – 38. *Sacculifer rufinervis*：35. Vesica；36. Left paramere；37. Right paramere；38. Phallotheca.

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红楔盲蝽属二新种及叶盲蝽族五新记录种记述
(半翅目,盲蝽科,叶盲蝽亚科)

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摘要:本文首次记述了红楔盲蝽属在中国的分布,并描述了该属 2 新种:矛红楔盲蝽 *Rubrocuneocoris lanceus* sp. nov. 和武定红楔盲蝽 *Rubrocuneocoris wudingensis* sp. nov.。报道了叶盲蝽族中国 5 新纪录种:小圆头盲蝽 *Decomia tytthos* Schuh,1984,黄薄盲蝽 *Moissonia importunitas* (Distant, 1910),新几内亚薄盲蝽 *Moissonia novoguinensis* (Schuh, 1984),齿单突盲蝽 *Opuna ryandi* Schuh,1984 及北方囊鞘盲蝽 *Sacculifer rufinervis* (Jakovlev, 1880)。提供了成虫体背面观照片及雄外生殖器特征图。模式标本保存在南开大学昆虫学研究所。

关键词:半翅目;叶盲蝽亚科;红楔盲蝽属;新种;新纪录;中国

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